



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/585,148

06/29/2006

Michael F. Greene

20040136

9898

22500

7590

11/26/2010

BAE SYSTEMS

PO BOX 868

NASHUA, NH 03061-0868

EXAMINER

LAU, HOI CHING

ART UNIT

PAPER NUMBER

2612

MAIL DATE

DELIVERY MODE

11/26/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/585,148 | <b>Applicant(s)</b><br>GREENE ET AL. |  |
|                              | <b>Examiner</b><br>HOI C. LAU        | <b>Art Unit</b><br>2612              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1- 18 have been examined.

***Response to Amendment***

2. Examiner acknowledges the changes made to the claims by applicant via amendment. The objections of claims 8 and 9 from previous office action have been overcome as a result of amendment and remarks.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 8 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim subject matter "said standard transceiver having no self-configuring capability for configuring itself to a communications format and frequency" is not supported in the original disclosure. Although the original disclosure stated for example, the standard radio (68 or 94) is

Art Unit: 2612

connected to the standalone add-on module (60 or 90) [see Fig. 6A, 7B, 14; Para. 64-73, 121 of original disclosure], however the original disclosure does not specific discloses such standard transceiver having no self-configuring capability for configuring itself to a communications format and frequency.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al. (U.S. 2005/0001720) in view of Zuckerman et al. (US 5,404,577)

Regarding **claim 1**, Mason teaches a system with use on an ad hoc temporary incident area network in which a transceiver [FASS device] is in use with and coupled to a module [the combination of antenna unit and CPU] to transmit audio information available from the transceiver to a common format and frequency of the temporary incident area network without using direct sensor data transmission, thus to assure that all standard receivers [would have been obvious shown by other FASS device on the network] on said ad hoc temporary incident network can intercommunicate (Fig. 9-10);  
a sensor coupled to one of said modules for coupling sensor data to said module (Fig. 6);

a circuit (the internal circuitry for communication) at said module for uploading sensor data to said network; and,

a downloading unit [would have been obvious shown by the command terminal and/or the other field device on the network based upon the similarity of the operational function; Para. 63,84,90] at a node for downloading the sensor data carried by said network and for displaying said sensor data at said node, thus to reliably provide sensor data by using said network (fig. 1, 2, 4, 6; Para. 24-27, 31-36, 42, 46, 64, 73, 78, 93).

This system would have been obvious automatically converts audio information available from the transceiver to a format and frequency assigned to equipment operating on the temporary incident area network (Para. 33, 40-43, 46, 57, 60, 69, 70, 73-74, 79, 93) which is without using direct sensor data transmission because it is corresponding to different protocol and method and is separated from the direct sensor data transmission.

Mason further discloses an incident an incident area network system comprises the radios device automatically select communication bands/frequencies using signal information of the bands. As each responder individual arrives on scene they are immediately and automatically networked with each other and with the on-scene incident commander via their field device. The responder radios support peer-to-peer ad-hoc wireless networking, with multi-hop routing of data packets among the nodes. The responder radios use a Voice over Internet Protocol (VOIP) or other voice enabling technique and wireless local area network (WLAN) for data and audio communications. The responder radio transmits and receives voice and data messages on common

Art Unit: 2612

frequencies for all responders in order to provide an integrated response by responders from all agencies present in the incident area. The responder radios self-configure the communication channels to optimize data transmission. The FASS device use on or more several RF technology and modulation formats (Para. 33,40-43, 46, 57, 60, 69, 70, 73-74, 79, 93) wherein the components of the responder radios support communication via any number of protocols and frequency bands known in the art [therefore would have been obvious to be standard protocols and frequency bands known in the art], specifically 802.1X standard, Bluetooth, etc. Therefore, it would have been obvious to one of the ordinary skill in the art the transceiver as suggest by Mason is a standard transceiver. In addition, the standard criteria for one may or may not be standard for another, thereby it would have been obvious the transceiver as suggest by Mason would be a standard components for the system of Mason. The implementation of such standard protocols and frequency bands would have been predictable and results in a standard transceiver. Therefore, the claimed subject matter would have been obvious to person having ordinary skill in the art at the time the invention was made.

Mason does not explicitly mention the standard transceiver having no self-configuring capability for configuring itself to a communications format and frequency; and the module is configured as standalone add-on module for providing transceiver interoperability couple to said standard transceiver.

In the analogous of communication network, Zuckerman discloses a transceiver unit [26] having no self-configuring capability for configuring itself to a long range

Art Unit: 2612

communication format and frequency; a standalone add-on module [34] for providing transceiver interoperability coupled to a said transceiver to automatically convert audio information available from said transceiver to a common format and frequency assigned to equipment and facility (16 and 18) operating on a network (Fig. 6, 13; col. 5, lines 1-48).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the integrated module with the transceiver as suggested by Mason to implement as the standalone add-on module with the transceiver as suggested by Zuckerman, so that the transceiver as suggested by Mason could be operated as a common transceiver which could be widely distributed to all responders and the standalone add-on module would allow the common transceiver to log on a specific event network as shown by Zuckerman, thereby increasing the flexibility of communication system and reduce the complexity of the transceiver with module as suggested by Mason. In addition, rather the connection module is integrated to the transceiver, for example, a network card or network integrated circuitry, or externally coupled to the as transceiver suggested by Zuckerman would be an arbitrary design choice based on the specific configuration of the system.

Regarding **claim 2**, Mason meets the limitation of claim and further shows the apparatus including a camera at said module for providing image signals as an output thereof, said uploading circuit uploading said image signals (Para. 86, 119).

Regarding **claim 3-4**, Mason meets the limitation of claim and further shows the image signals include video signals (Para. 119) wherein such video signals have been

Art Unit: 2612

obvious to one of ordinary skill in the art is provided by the camera because the camera device as shown by Mason could be an video camera or still image camera, therefore provide video data as recite by Mason and still picture signal as a conventional still image capturing camera in the art since they an alternative output and would be using one known technique to improve similar device.

Regarding **claim 5**, Mason meets the limitation of claim and further shows the sensor is taken from the group consisting of location sensors, oxygen tank sensors, gas sensors, HAZMAT sensors, photo-ionization sensors and biometric sensors (Para. 86)

Regarding **claim 6**, Mason meets the limitation of claim and further shows an incident commander terminal having a display coupled to said node and wherein the sensor data transmitted over said network is displayed for said incident commander at the associated incident commander display terminal, thereby to provide said incident commander with situational awareness based on said sensor data (fig. 1, 2, 4, 6; Para. 24-27, 31-36, 42, 46, 64, 73, 78).

Regarding **claim 7**, Mason meets the limitation of claim and further shows the sensor data includes information relating to the location of said module and wherein said display includes a map and an icon indicating the location of said module (fig. 1, 2, 4, 6; Para. 24-29, 33, 41, 44, 45).

6. Claims 8, 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al. (U.S. 2005/0001720), in view of Schlager et al. (US 2003/0102972), further in view of Zuckerman et al. (US 5,404,577).



Regarding **claim 8**, Mason teaches an ad hoc temporary incident area network having equipment operating thereon:

a handheld transceiver having audio in, audio out; and, a mini module carried or coupled by said handheld transceiver coupled to said outputs for at least automatically converting verbal communications associated with said transceiver to the common frequency and format compatible with said network, said mini module including circuits for transmitting said verbal communications between modules over said network (fig. 1, 2, 4, 6; Para. 24-27, 31-36, 42, 46, 64, 73, 78).

Mason further discloses an incident an incident area network system comprises the radios device automatically select communication bands/frequencies using signal information of the bands. As each responder individual arrives on scene they are immediately and automatically networked with each other and with the on-scene incident commander via their field device. The responder radios support peer-to-peer ad-hoc wireless networking, with multi-hop routing of data packets among the nodes. The responder radios use a Voice over Internet Protocol (VOIP) or other voice enabling technique and wireless local area network (WLAN) for data and audio communications. The responder radio transmits and receives voice and data messages on common frequencies for all responders in order to provide an integrated response by responders from all agencies present in the incident area. The responder radios self-configure the communication channels to optimize data transmission. The FASS device use on or more several RF technology and modulation formats (Para. 33,40-43, 46, 57, 60, 69, 70, 73-74, 79, 93) wherein the components of the responder radios support

Art Unit: 2612

communication via any number of protocols and frequency bands known in the art [therefore would have been obvious to be standard protocols and frequency bands known in the art], specifically 802.1X standard, Bluetooth, etc. Therefore, it would have been obvious to one of the ordinary skill in the art the transceiver as suggest by Mason is a standard transceiver. In addition, the standard criteria for one may or may not be standard for another, thereby it would have been obvious the transceiver as suggest by Mason would be a standard components for the system of Mason. The implementation of such standard protocols and frequency bands would have been predictable and results in a standard transceiver. Therefore, the claimed subject matter would have been obvious to person having ordinary skill in the art at the time the invention was made.

Mason does not explicitly mention the two-way radio device incorporates a push-to-talk outputs available external thereto.

However, such push-to-talk outputs available externally would be a well-known feature for two-way radio device and Schlager specific mention a communication device has a push-to-talk arrangement thereof, therefore would have been obvious to one of ordinary skill in the art at the time of invention of incorporate push-to-talk output with apparatus as taught by Mason because it would provide manually activation for voice communication.

Mason does not further explicitly mention the standard transceiver having no self-configuring capability for configuring itself to a communications format and frequency;

Art Unit: 2612

and the module is configured as add-on module for providing transceiver interoperability couple to said standard transceiver.

In the analogous of communication network, Zuckerman discloses a transceiver unit [26] having no self-configuring capability for configuring itself to a long range communication format and frequency; a standalone add-on module [34] for providing transceiver interoperability coupled to a said transceiver to automatically convert audio information available form said transceiver to a common format and frequency assigned to equipment and facility (16 and 18) operating on a network (Fig. 6, 13; col. 5, lines 1-48).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the integrated module with the transceiver as suggested by Mason to implement as the add-on module with the transceiver as suggest by Zuckerman, so that the transceiver as suggested by Mason could be operated as a common transceiver which could be widely distributed to all responders and the standalone add-on module would allow the common transceiver to log on a specific event network as shown by Zuckerman, thereby increasing the flexibility of communication system and reduce the complexity of the transceiver with module as suggested by Mason. In addition, rather the connection module is integrated to the transceiver, for example, a network card or network integrated circuitry, or externally coupled to the as transceiver suggest by Zuckerman would be an arbitrary design choice based on the specific configuration of the system.

Regarding **claim 10**, the combination meets the limitation of claim and Mason further shows a sensor coupled to said mini module, said mini module including a circuit for uploading data from said sensor to said network (fig. 1, 2, 4, 6; Para. 24-27, 31-36, 42, 46, 64, 73, 78).

Regarding **claim 11**, the combination meets the limitation of claim and Mason further shows a predetermined number uniquely identifying said mini module, and wherein said uploading circuit uploads said unique identifying number (Para. 72, 78, 94, 98, 110-111).

Regarding **claim 12**, the combination meets the limitation of claim and Mason further shows a camera coupled to said mini module and wherein said uploading circuit includes a circuit for uploading the output from said camera to said network (Para. 86, 119).

Regarding **claim 13**, the combination meets the limitation of claim and Mason further shows the image signals include video signals (Para. 119) wherein such video signals have been obvious to one of ordinary skill in the art is provided by the camera because the camera device as shown by Mason could be an video camera or still image camera, therefore provide video data as recite by Mason and still picture signal as a conventional still image capturing camera in the art since they an alternative output and would be using one known technique to improve similar device.

Regarding **claim 14**, the combination meets the limitation of claim and Mason further shows including wearable sensors coupled to said mini module adapted to be worn by the individual using said transceiver, said sensors coupling data collected by a

Art Unit: 2612

sensor that relates to events in the immediate vicinity of said individual to said mini module, whereby sensor data uploaded to said network and available at a node thereof is downloadable to said node for providing situational awareness of conditions in the incident scene at said individual, thus to provide situational awareness based on sensed conditions at said individual (Para. 34, 25, 85, 89, 93).

Regarding **claim 15**, the combination meets the limitation of claim and Mason further shows the sensor includes a camera, whereby images in the vicinity of said individual are transmitted over said network to said node to support situational awareness (Para. 34, 86, 119, 25, 85, 89, 93).

Regarding **claim 16**, the combination meets the limitation of claim and Mason further shows the mesh wireless network for coupling said sensor to said mini module, whereby said sensor can be worn by said individual and wirelessly connected to said mini module. The Mesh wireless network would have been obvious to one of ordinary skill in the art at the time of invention is implemented as a local wireless network in respect to the system and the distance or use between the components.

Regarding **claim 17**, the combination meets the limitation of claim and Mason further shows the wireless network includes a Blue Tooth network (Para. 34, 86, 119, 25, 85, 89, 93).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al. (U.S. 2005/0001720), in view of Schlager et al. (US 2003/0102972), further in view of Zuckerman et al. (US 5,404,577) and Yang (US 2004/0185902).

Regarding **claim 9**, the combination meets the limitation of claim, but does not explicitly mention the handheld transceiver includes a battery and an external power connection contact and wherein said mini module includes a power input connection contact coupled to said external power connection contact for the powering of said mini module from the battery of said handheld transceiver.

In the analogous art of communication system, Yang discloses a handheld communication transceiver module [for example, cell phone] includes a battery and an external power connection contact and mini module [input and output interface unit] includes a power input connection contact coupled to said external power connection contact for the powering of said mini module from the battery of said handheld transceiver during the combination mode if only one of the module [for example, the main unit] is provided with battery power (Fig. 1-2, Para. 5, 8-9, 11).

It would have been obvious to one of ordinary skill in the art at the time of invention to implement power connection between the two units as suggest by Yang because it would allow one of the unit serves as the energy source in order to reduce the number of the battery components of the system during the combine configuration. In addition, it would allow the mini module as a separatable device which enhance replacement of device if failure of any electronic components. Further the infrastructure for the functionality between the different electronic module, for example, the mini module and the handheld transceiver in respect to the integration or separate-in-part would depend on the configuration of the system based upon the specific application.

Art Unit: 2612

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al. (U.S. 2005/0001720), in view of Schlager et al. (US 2003/0102972), further in view of Zuckerman et al. (US 5,404,577) and Fors et al. (US 7,289,825).

Regarding **claim 18**, the combination meets the limitation of claim and Mason further shows a headset communicating with said mini module, whereby verbal communications can be established between said mini module and said network regardless of said handheld transceiver (fig. 1, 2, 4, 6; Para. 59, 73, 78), but does not explicitly mention the headset is wireless communicating with the mini module.

In the analogous art, Fors discloses a wireless radio communication device 110 is wireless communicating with a wireless headset and configured to verbal communicate with different terminals on the network (Fig. 1-3; col. 4, line 59 - col. 5, line 38; col. 9, lines 38-53).

It would have been obvious to one of ordinary skill in the art at the time of invention to associate the wireless headset as suggest by Fors to the headset components as shown by Mason, so the user could freely operates the headset without the inconvenience of any wired connection between the mini module and the headset. One of ordinary skill in eth art could have pursued the known potential solutions with a reasonable expectation of success by using either wired or wireless connection.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HOI C. LAU whose telephone number is (571)272-8547. The examiner can normally be reached on M- F 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Bugg can be reached on (571)272-2998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hoi C Lau/  
Examiner, Art Unit 2612

/George A Bugg/  
Supervisory Patent Examiner, Art Unit 2612